

ORDER NO. **ARP2758**

STEREO CASSETTE DECK

CT-95, CT-S920S AND CT-S920S-G HAVE THE FOLLOWING:

Туре		Model			·
туре	CT-95	CT-S920S	CT-S920S-G	Power Requirement	Remarks
HEM	0	0	0	AC220 - 230V, 240V (switchable) *	
SD	0	-	-	AC110V, 120 - 127V, 220V, 240V (switchable)	

^{*} Change the connection of the power transformer's primary wiring.

- This manual is applicable to the following: CT-95/HEM and SD; CT-S920S/HEM; CT-S920S-G/HEM.
- For the following: CT-95/SD; CT-S920S/HEM; CT-S920S-G/HEM, refer to page 37.
- CT-S920S-G is the same as CT-S920S except for color.

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1. EXPLODED VIEWS AND PARTS LIST

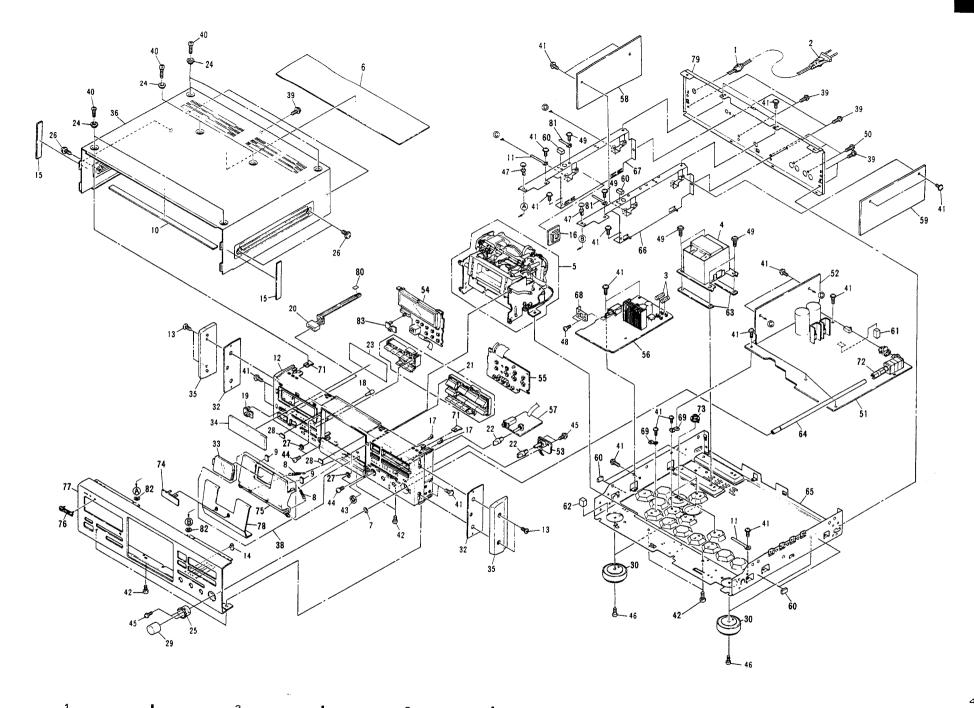
1.1 EXTERIOR

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The \triangle mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
Δ	1	Strain relief	CM - 22B		41	Screw	IBZ30P080FCC
A	2	AC power cord	ADG1036		42	Screw	BBT30P100FZK
$\overline{\Lambda}$	3	FU601, FU602 Fuse (T2A)REK - 103		43	Nut	RBN - 006
$\overline{\Lambda}$	4	T1 Power transformer	RTT1201		44	Screw	BBZ30P080FZK
∆ ∆ ⊙	5	Mechanism unit	RYM1185		45	Screw	BBZ26P080FZK
	_					,	
	6	Absorb plate (B)	PNB1109		46	Screw	IBZ30P150FCC
	7	Washer	RBF1019		47	Nylon rivet	RBM - 003
	8	Door coil spring	RBH1306		48	Screw	PMA30P060FCU
	9	Door cushion	REB1174		49	Screw	IBZ40P080FCC
	10	Protector	RED1020		50	Screw	IBZ30P100FCC
	11	Cord clamper	RNH - 184		51	Main unit	RWX1081
	12	Panel stay	RNT1176		52	Control unit	RWZ2984
	13	Screw	ABA1131		53	BAL. VR unit	RWZ2985
	14	LED lens	AMR1160		54	FL unit	RWZ2986
	15	Side spacer	PNM1150		55	Operation unit	RWZ2987
					-	Operation with	111122001
NSP	16	Holder	PNW1021	NSP	56	Bias unit	RWZ2988
	17	lens S	PNW1893	NSP	57	Headphone unit	RWZ2989
	18	Counter reset knob	RAA1009	NSP	58	Encode unit	RWZ2743
	19	Side SW knob	RAC1540	NSP	59	Decode unit	RWZ2744
	20	Power button	RAC1657	NSP	60	Rubber spacer (A)	REB1057
	21	Control knob	RAC1658	NSP	61	Rubber spacer	REB1192
	22	Balance knob	RAC1662	NSP	62	Rubber spacer	REB1187
	23	FL filter	RAH1936	NSP	63	Transformer sheet	REE1004
	24	collar	RAT1002	NSP	64	VR shaft	RLA1169
	25	VR ring	RAT1012	NSP	65	Main chassis	RNB1042
	-	41. 1mg	10111012	1101	00	Ividiii Cildassis	NND1042
	26	Screw	RBA1088	NSP	66	Center stay	RNC1068
	27	Washer	REC1180	NSP	67	Center stay	RNC1069
	28	Door sheet	REB1191	NSP	68	PS holder	RNE1185
	29	VR knob assembly A	RXA1439	NSP	69	PCB base	RNE1221
	30	Leg assembly	AMR1159		70		74.21021
	31			MCD	21	Donnet bereitet	D3771 450
	32		DEDITO	NSP	71	Bonnet bracket	RNE1470
	32 33	Side spacer Door lens	PEB1197	NSP	72	Joint	RNK1333
			RAH1927	NSP	73	PCB stud	RNL - 792
	34	FL lens	RAH2019		74	Badge	RAN1006
	35	Side panel	RAH1931	NSP	75	Door	RNK1756
	36	Bonnet	RXX1427		76	Badge	RAN1011
	37	•••••			77	Front panel	RAH2280
	38	Door assembly	REA1002	NSP	78	Door panel	RAH2133
	39	Screw	IBZ30P060FCC	NSP	79	Rear panel	RNA1718
	40	Screw	RBA1098		80	Acetate tape	REH1020
				NSP	81	Cord clamper	DNF1128
				NSP	82	Washar	RBF1017
					83	Slide SW knob	RAC1540



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1.2 MECHANISM UNIT

Parts List

Mark		Description	Part No.	Mark	No.	Description	Part No.
	1	Rotary encoder	RSX1004		51	Head base set spring	RBL - 026
	2	Capstan motor assembly			52	Gear chassis assembly	RXA1171
	3	Reel motor assembly	RXM1018		53	Screw	BBZ26P080FZK
	4	Step screw	RBA1074		54	Pinch base assembly	RXB - 878
	5	Cassette plate assembly	RXX1064		55	Screw	BBZ30P080FZK
	6	Insulator	REB1099		56	Eject lever	RNK1763
	7	Pinch spring	RBL - 028		57	Screw	BCZ30P060FMC
	8	Pinch thrust spring	RBL - 030		58	Screw	BMZ26P030FZK
	9	Sub - pinch spring	RBL - 098		59	Screw	BMZ26P040FMC
	10	Capstan belt	REB - 501		60	Screw	BMZ26P060FZK
	11	Capstan belt (A)	REB - 509		61	Sćrew	BMZ30P080FZK
	12	Tape guide	RNK1823		62	Screw	PMZ30P040FMC
	13	Flywheel assembly	RXA1374		63	Screw	PMA26P050FZK
	14	Sub - flywheel assembly			64	Screw	PMA26P060FZK
	15	Metal holder assembly (A)	RXA1426		65	Screw	PMZ20P080FZK
	16	Metal holder assembly (B)			66	Washer	RBF - 030
	17	Pinch roller arm (R)	RXB - 876		67	Stabilizer B	REB1038
	••	assembly			68	Earth spring	RBL - 059
	18	Pinch roller arm (A)	RXB - 877		69	Washer	RBF - 076
	10	assembly			70	Washer	RBF1040
	19 20	BT spring (A)	RBL - 031				
	20	BT spring (B)	RBL - 032		71	Binder	REC - 371
	21	T41			72	Steel ball (3mm)	REF - 022
	22	Idler pressure spring	RBL - 033		73	Steel ball (4mm)	REF - 023
	23	Reel shaft cap (B)	RNK - 815		74	Screw	VCT30P060FZK
		BT disk assembly	RXB - 751		75	LED (D3)	SLF - 401C
	24 25	Reel base assembly	RXB - 874				
	23	Take - up idler assembly	RXB - 875		76	Washer	WA21D040D013
	26	Washer	DDD oos		77	Washer	WA26N070W040
	27	Head base spring	RBF - 065		78	Washer	WA32D080D050
	28	Brake spring	RBL - 037		79	E ring	YE20FUC
	29	Drive belt	RBL ~ 038 REB1182		80	E ring	YE25FUC
	30	Brake shoe	REB - 511				
	••	Drane shoe	KEB - 511		81	E ring	YE30FUC
	31	Brake	RNL - 723		82	Snap ring	YS24FBT
	32		RNK1640		83	Shift saft assembly	RXB - 885
	33	Side cam gear	RNK1765		84	Head base assembly	REA1020
	34		RBH1226		85	Mechanism chassis	RXA1366
	35		RBL - 039			assembly	
					86	Brake lever	RNK1638
	36		RBL - 040		87	Second pulley assembly	RXA1350
	37		RBL - 041		88	Door frame (L)	RNE1475
	38		RBL - 042		89	Pinch lever assembly	RXA1360
		spring			90	Door flame (R)	RNE1476
	39		RNE1604				
	40	plate	F1		91	Damper assembly	VXA1153
	40	Flywheel holder	RNH - 304			Half pressure spring	RBK1004
	41	Cord clamper	RNH ~ 184			Door pocket	RNK1865
	42		RNK1497			Loading motor	VXM1034
			RNL - 733		95	Screw	PBZ20P060FMC
		<u> </u>	RNL - 734		06	C	
			RNL - 735			Screw Stabilizer	BBZ20P060FMC
						Washer	REB1161 RBF - 057
		Thrust holder	RNL - 743			Tape (B)	REH1003
		Motor pulley	PNW1634			Connector assembly (2P)	
			RNL – 725		-	22	1000
			RNL - 742				
	50	Pressure arm (L)	RNL - 726				

Mark	No.	Description	Part No.
NSP	101	Gear base assembly	RXB - 882
NSP	102	E head	RPB1046
NSP	103	R&P head	RPB1049
NSP	104	Connector unit	RWZ2459
NSP	105	Adjustment nut	RBA1047
NSP	106	Head adjustment spring C	RBL - 034
NSP	107	Hight spring	RBL - 036
NSP	108	Head base	RNG - 334
NSP	109	Sub - head base	RNG 335
NSP	110	E head base	RNG1033
NSP	111	Earth lead assembly	RDF - 001
NSP	112	REC switch unit	RWZ2457
NSP	113	Tape selector unit	RWZ2458
NSP	114	Sensor unit (B)	RWZ2460
NSP	115	Cassette plate	RAH1306
NSP	116	Lead wire holder	RNL ~ 793
NSP	117	Shif roller	RNL - 731
	118	Connector assembly (4P)	
	119	Connector assembly (4P)	

CT-95

CT-95

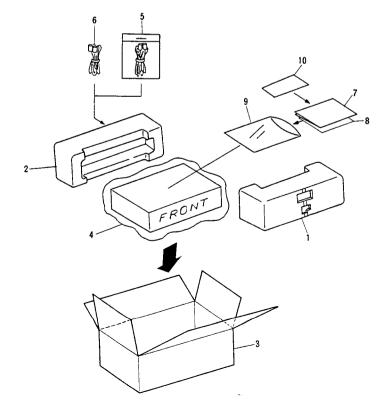
2. PACKING AND PARTS LIST

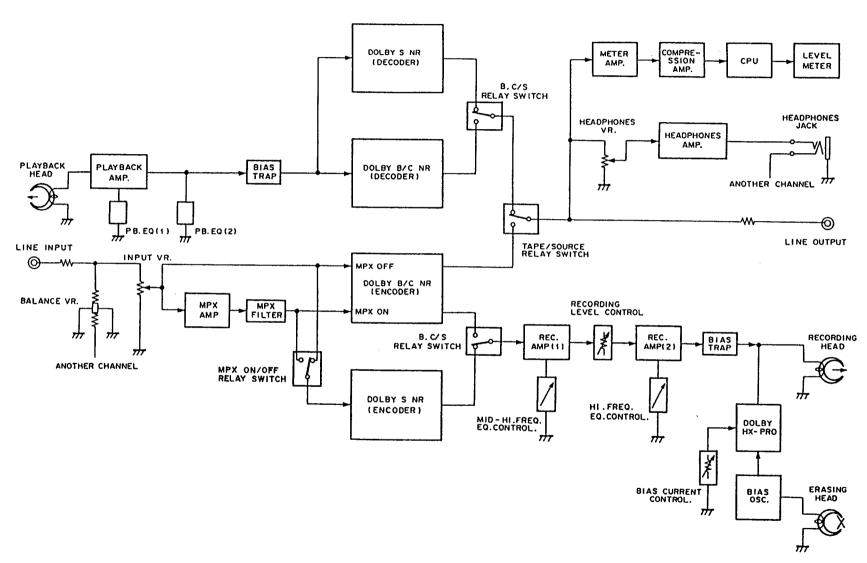
OTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
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Parts List

Mark	No.	Description	Part No.
	1	Pad (F)	RHA1073
	2	Pad (R)	RHA1074
	3	Packing case	RHG1489
	4	Sheet	RHX1007
	5	Connection cord assembly	RDE1013
	6	Control cord	RDE1030
•	7	Operating instructions (German/Italian/Dutch/	RRD1138
		Swedish/Spanish/Portugu	iese)
	8	Operating instructions (English/French)	RRE1078
	9	Plastic bag	Z21 - 038
NSP	10	Warranty card	ARW - 088





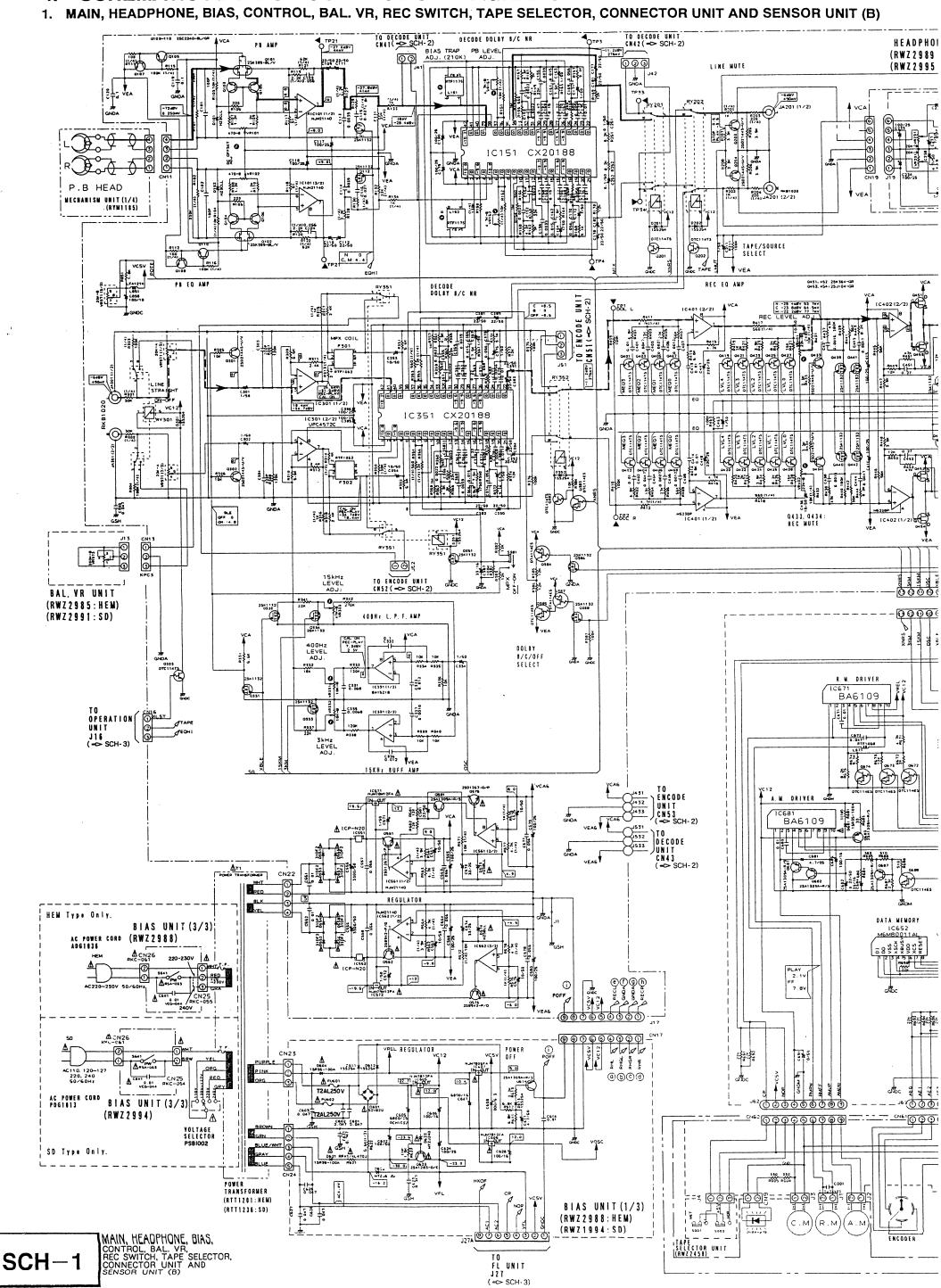
4. SCHEMATIC AND PCB CONNECTION DIAGRAMS

В

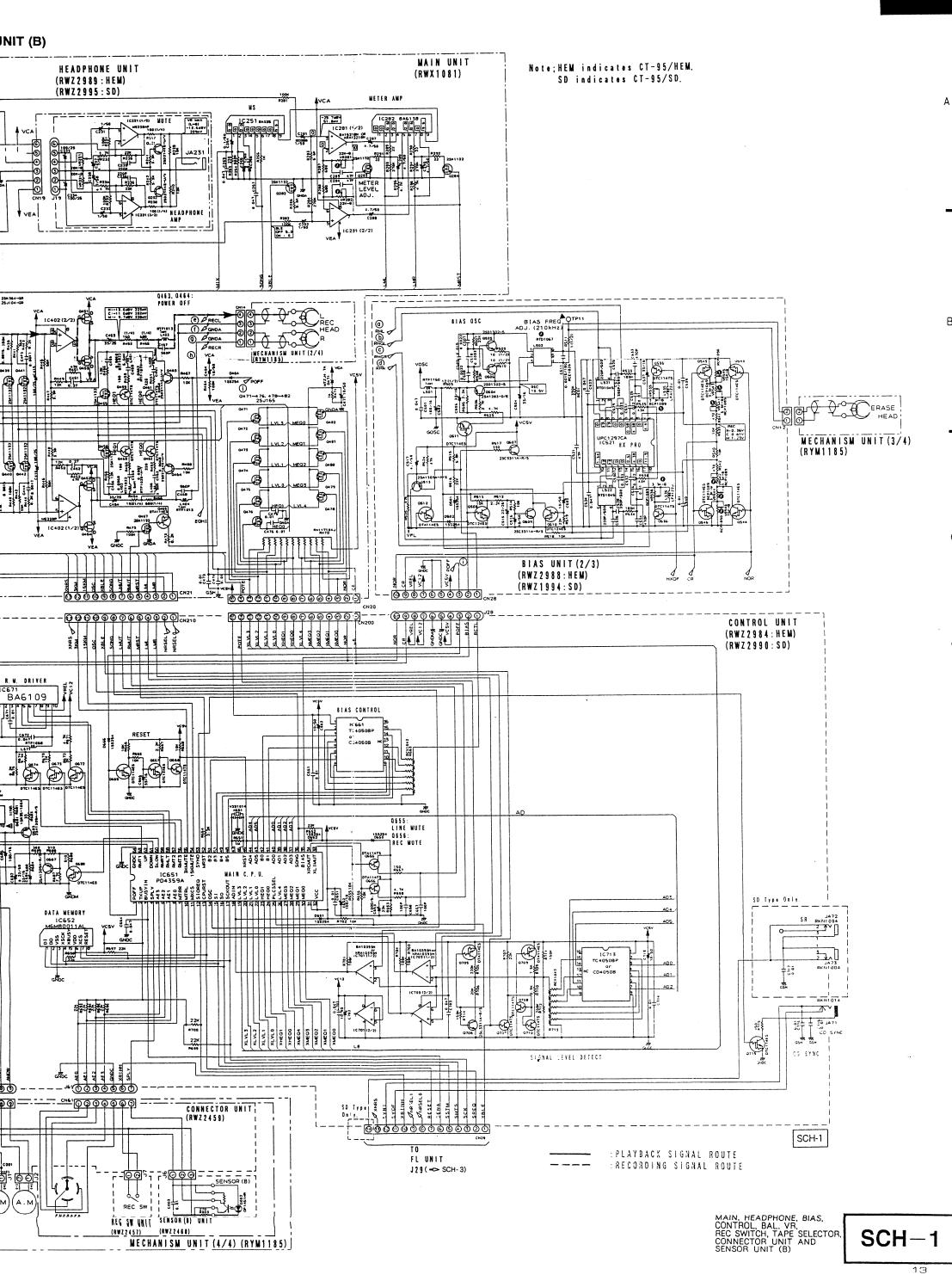
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В

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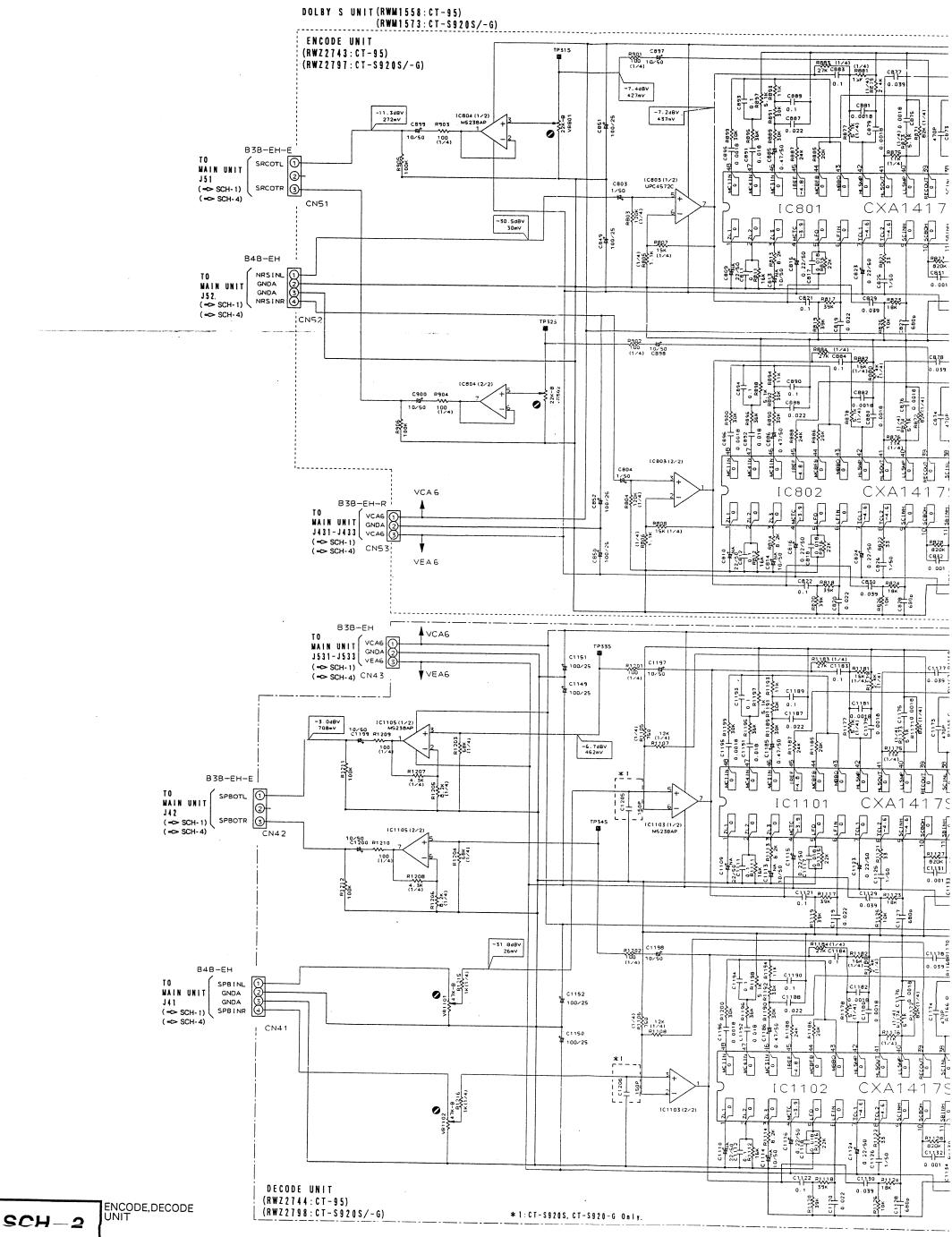
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2. ENCODE AND DECODE UNIT

CXA1417 820K C1131 0.039 CXA14175 0.22/50 C1126 BW22 BTCL2 1/50 33 151.1 E1 132 CT 132 CT 132 CT 1332 C 0 001 🛪 5



3

. 2

0.0018 Dolby Dolby CXA1417S Dolby

5

Note; CT-95 indicates CT-95/HEM and CT-95/SD. CT-S920S/-G indicates CT-S920S/HEM and CT-S920S-G/HEM.

Note:

(Type 6)

9

- 1. When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".
- 2. Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.
- 3. RESISTORS:

Unit: k:k Ω , M:M Ω , or Ω unless otherwise noted.

Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise

Tolerance: (F): $\pm 1\%$, (G): $\pm 2\%$, (K): $\pm 10\%$, (M): $\pm 20\%$ or $\pm 5\%$ unless otherwise noted.

4. CAPACITORS:

Unit: p:pF or µF unless otherwise noted. Ratings: capacitor (μF)/ voltage (V) unless otherwise noted. Rated voltage: 50V except for electrolytic capacitors.

5. COILS:

Unit: m:mH or µH unless otherwise noted.

6. VOLTAGE AND CURRENT:

: DC voltage (V) in STOP mode unless otherwise noted. ⇔ mA or - mA: DC current in STOP mode unless otherwise

7. OTHERS:

• ⇒ : Signal route.

• Ø : Adjusting point.

- ▼ (Red) : Measurement point. ullet The $ar{{\mathbb A}}$ mark found on some component parts indicates the im-
- portance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
- 8. SWITCHES (Underline indicates switch position):

BIAS UNIT

S641 : POWER

FL UNIT

\$721 : BLE (FLT) S/C

S722 : METER RANGE S723 : RESET

S724 : BIAS DOWN

S725 : PEAK MODE

S726 : COUNTER MODE

S727 : BIAS UP S728

: TAPE RETURN : DISPLAY OFF S729

: PLAY - OFF - REC S735

OPERATION UNIT

S781 : LINE STRAIGHT

S782 : DOLBY - NR SELECT S783 : HX PRO

S784 : MONITOR S785 : REC/MUTE

S786 : PAUSE

S787 : REC S788 : OPEN/CLOSE

S789 : FF S790 : PLAY

S791 : REW

S792 : STOP

S793 : CD CYNC

9. For SCH $-\Box$ on the schematic diagram.

• SCH - indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram,)

ENCODE, DECODE UNIT

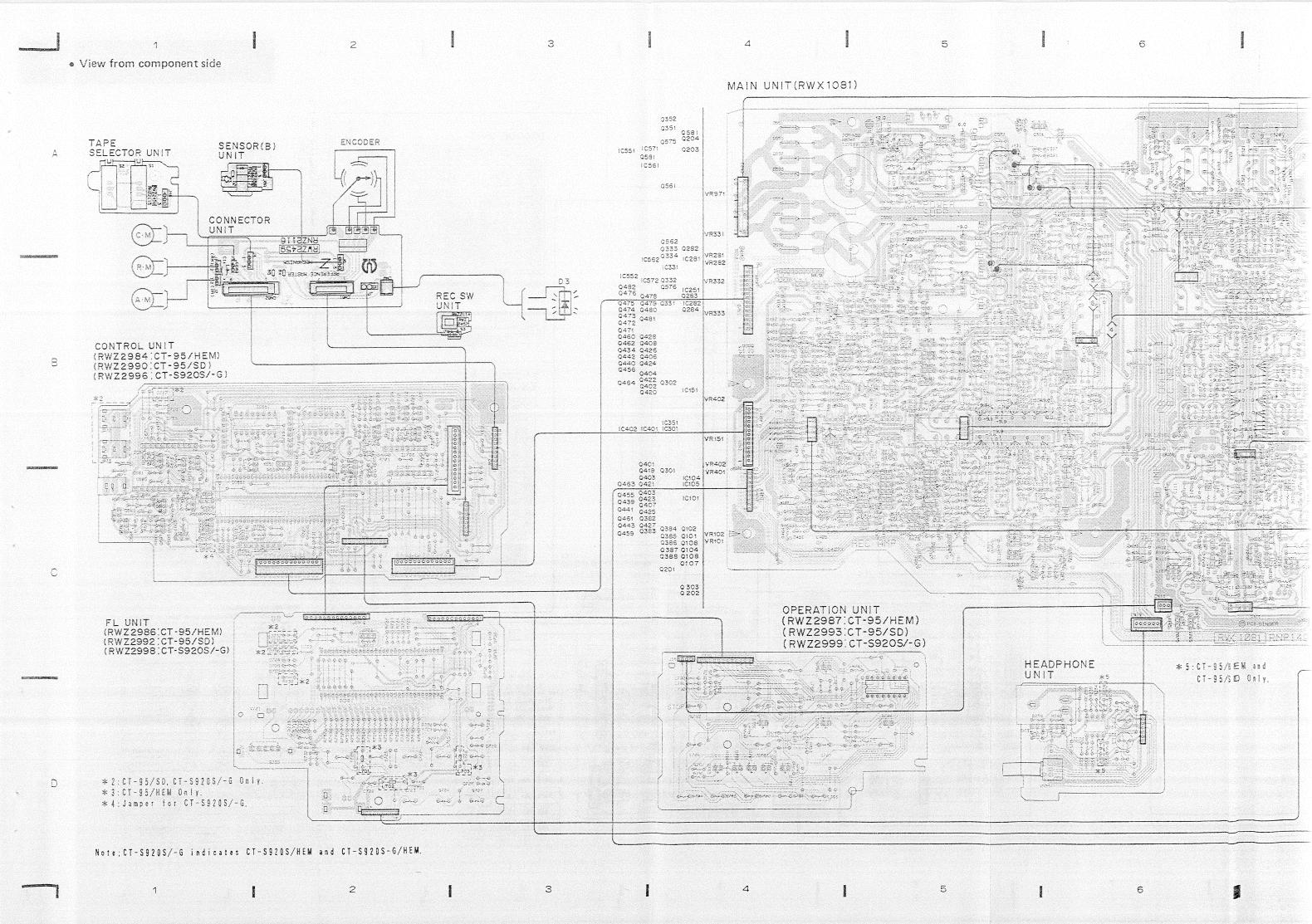
SCH-2

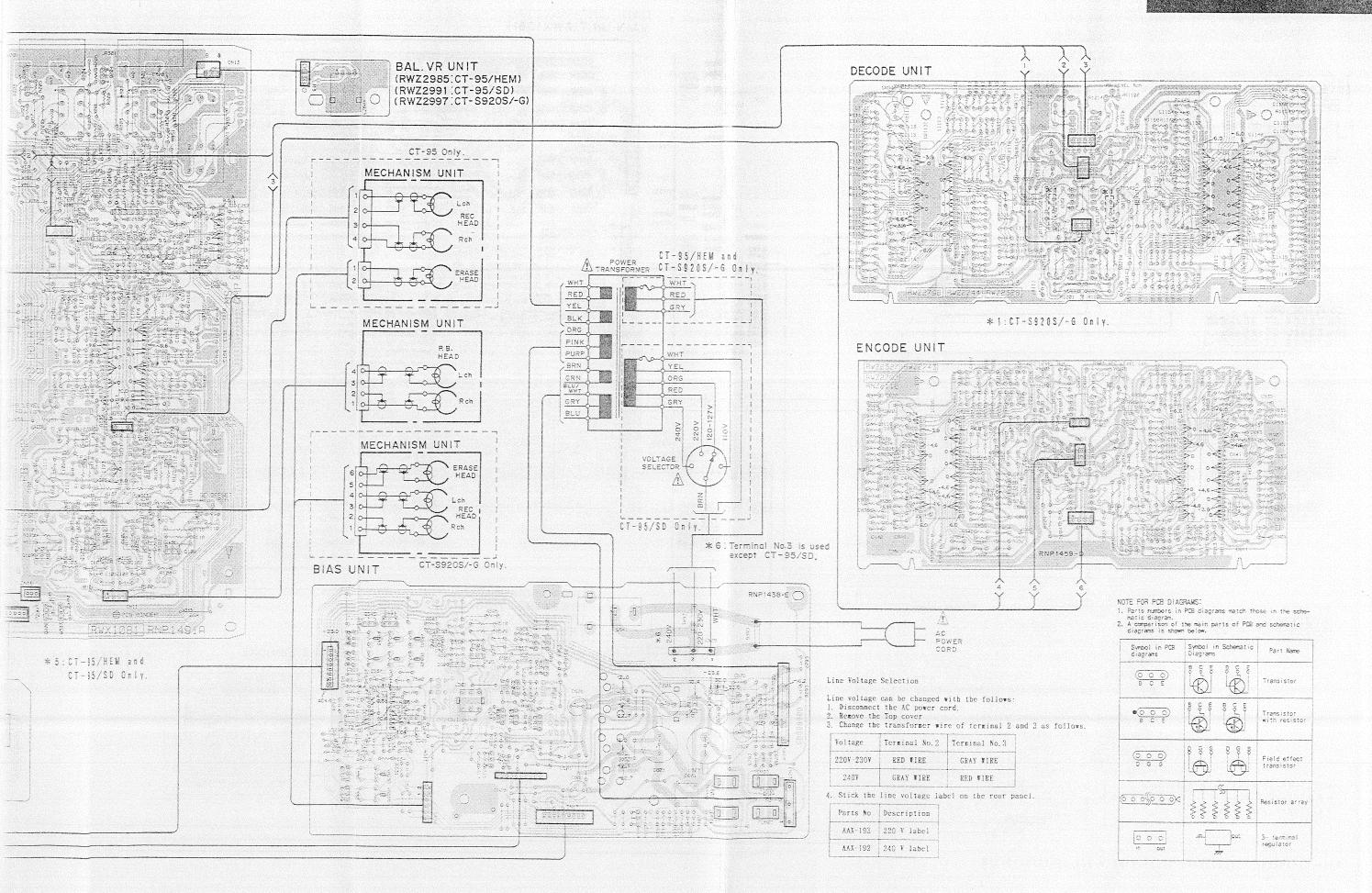
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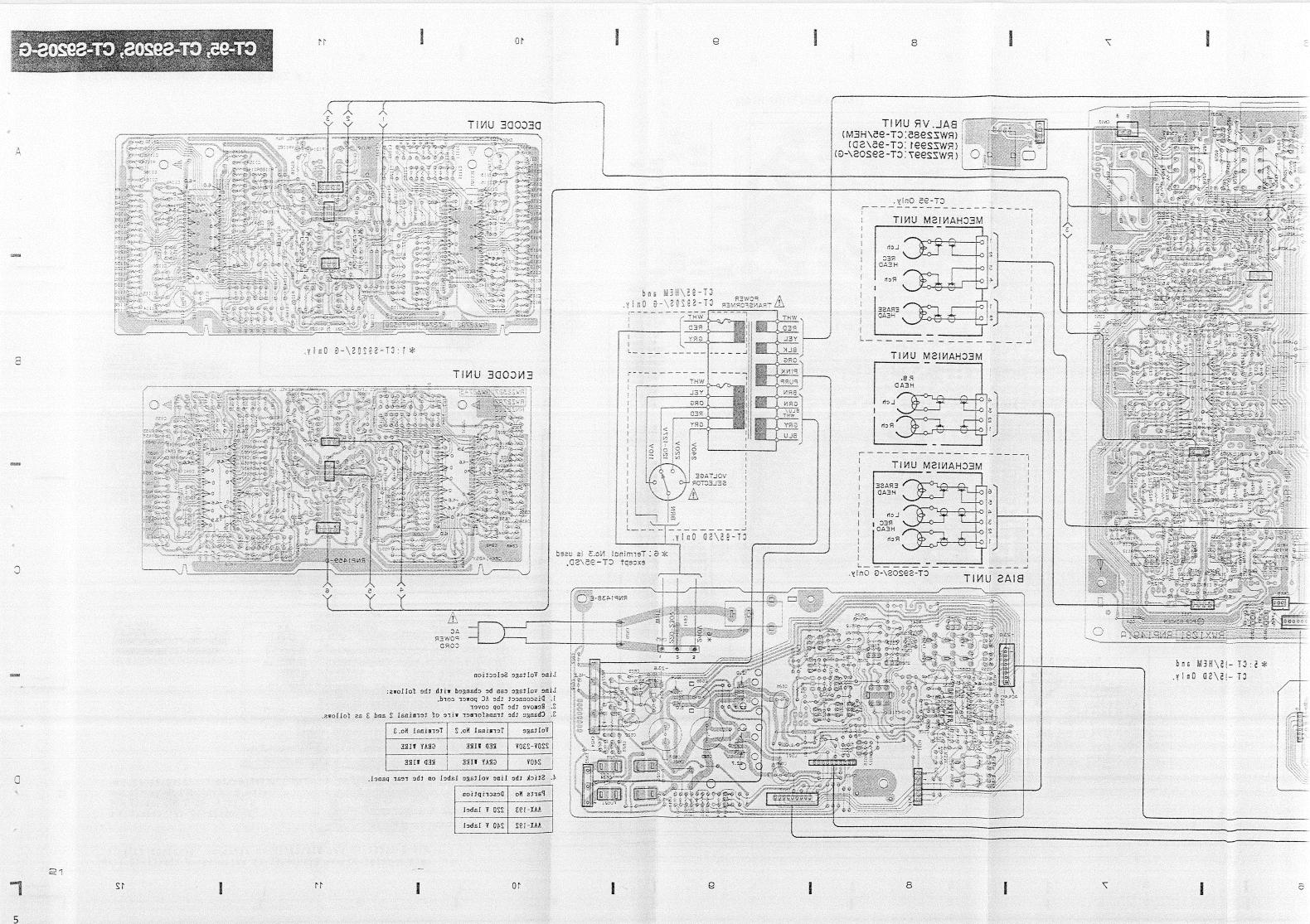
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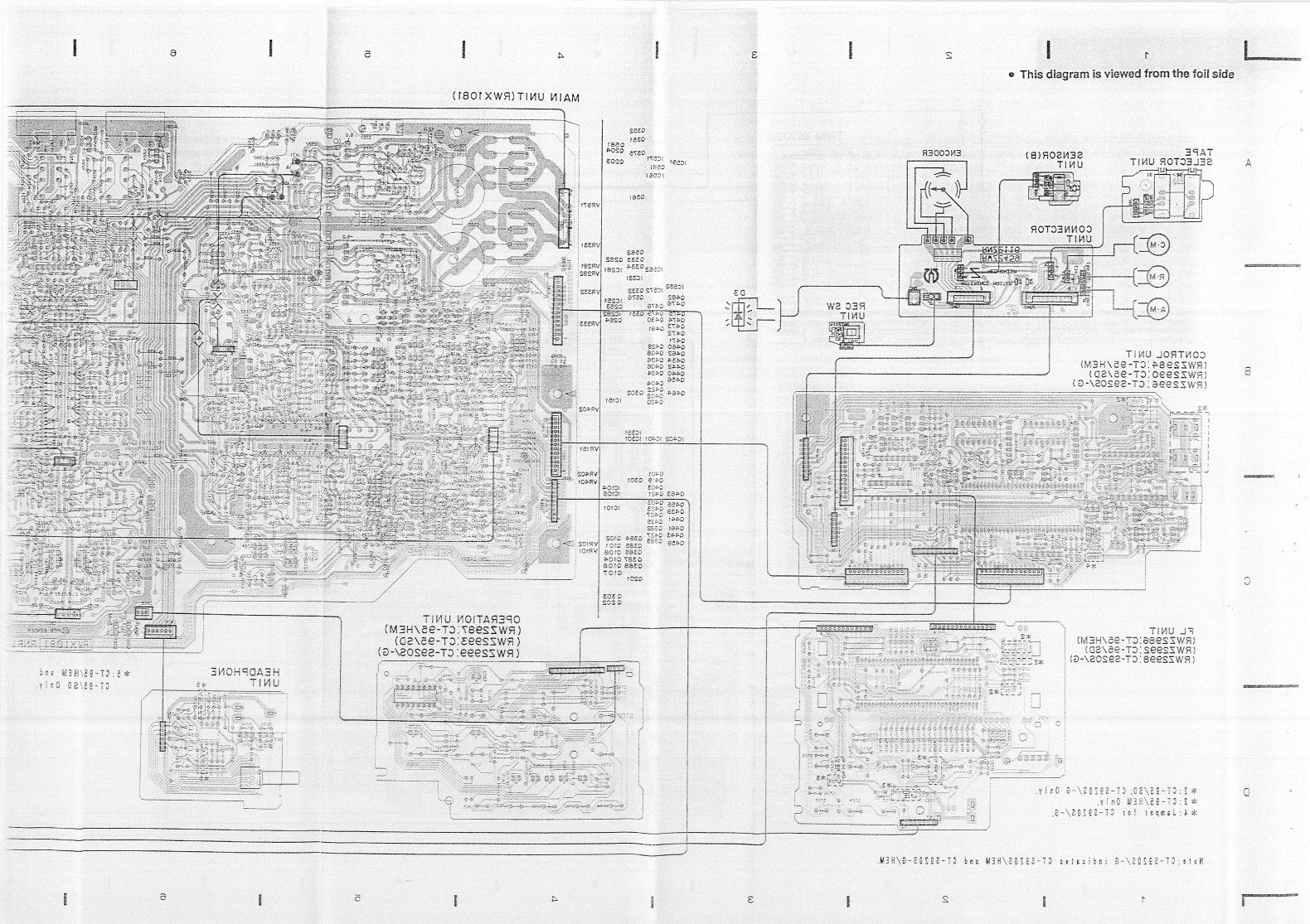
Dolby S-type phase 3

SCH-2

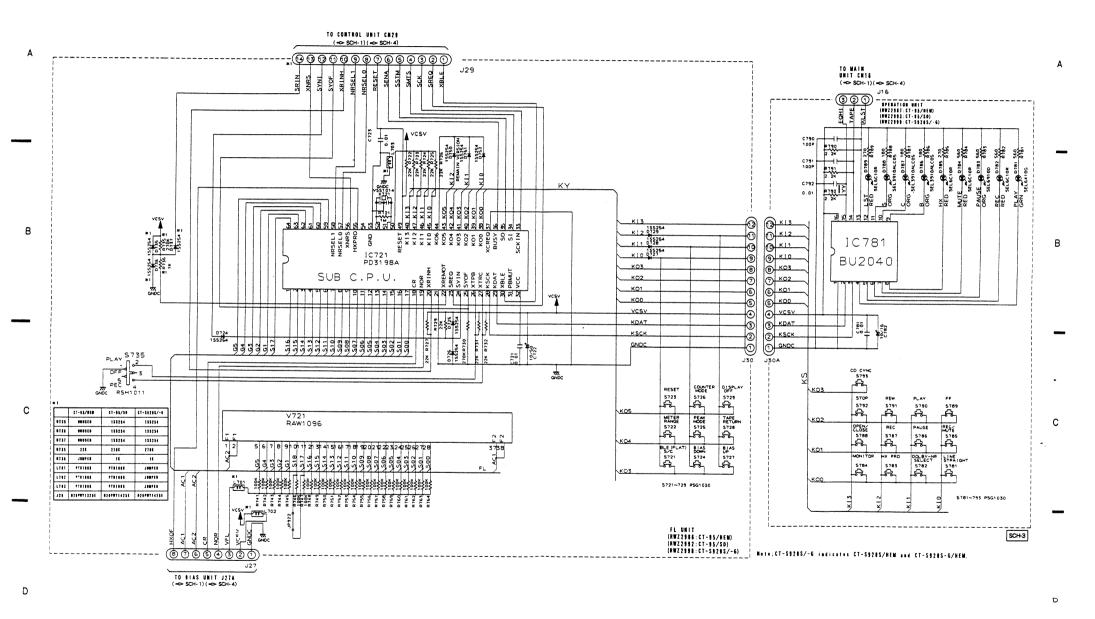








2



FL,OPERATION SCH-3

FL,OPERATION UNIT SCH-3



5. PCB PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The \triangle mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by " @" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

 $5.62k \Omega \rightarrow 562 \times 10^{\circ} \rightarrow 5621$ RN1/4PC[5][6][2][1]F

	k No. Description	Part No.	Mai	rk No.	Description	Part No.
LIS	T OF ASSEMBLIES			0453. 0454	ı	2SJ104
					i, Q478-Q482	2SJ165
	MAIN UNIT	RWX1081			, Q282-Q284, Q331-Q334,	2SK1132
		MAZIOOI			i, Q388, Q439-Q442, Q455.	25K1132
ISP	SUB UNIT	RWM1629				
	CONTROL UNIT	RWZ2984		Q456, Q467		
	- BAL. VR UNIT	RWZ2985		Q451, Q452	i e	2SK364
	- FL UNIT	RWZ2986		0101 010		
	- OPERATION UNIT	R#Z2987		Q101, Q102		2SK389
NSP	- BIAS UNIT			Q384, Q387		DTA114ES
NSP	HEADPHONE UNIT	RWZ2988		Q383, Q385		DTC114ES
NOP	- HEADPHONE UNII	RWZ2989			, Q303, Q382, Q401-Q408,	DTC114TS
	20121 0 1212			Q419-Q428	, Q459-Q462	
	DOLBY S UNIT	RWM1558		D201, D202	, D301, D351, D352	1SS254
NSP	ENCODE UNIT	RWZ2743				
NSP	└ DECODE UNIT	RWZ2744	⚠	D464		1SS254
			$\overline{\Lambda}$	D551-D558		31DF2-FC5
	RELAY UNIT	RWM1454	Δ	D101, D102		HZ3CLL
NSP	FREC SWITCH UNIT	RWZ2457	Ā	D573, D574		HZ5BLL
ISP	- TAPE SELECTOR UNIT	RWZ2458	443	D471		MTZJ4. 7A
NSP	- CONNECTOR UNIT	RWZ2459		DAII		MIZJ4. IA
NSP	SENSOR UNIT (B)	RWZ2460	SWE	TCHES		
	3 (J)	111111111111111111111111111111111111111	3111	S381		RSH1040
MA	IN UNIT		REL	AVS		
					02, RY301, RY351, RY352	RSR1016
SEM	ICONDUCTORS				02, R1001, R1001, R100 <i>2</i>	MARTOTO
	IC331	BA15218	COIL	s		
	IC281	BA15218N	00	L851		LFA121K
					(L=1mH(252KHz), Q=40)	LINICIN
	1C251					DTE1010
	IC251 IC282	BA335				RTF1013
	IC282	BA6138		L405, L406	(L=3.9mH(252KHz), Q=30)	RTF1020
				L405, L406 L401, L402	(L=3.9mH(252KHz), Q=30) (L=5.6mH(252KHz), Q=30)	RTF1020 RTF1022
•	IC282 IC151, IC351	BA6138 CX20188		L405, L406	(L=3.9mH(252KHz), Q=30) (L=5.6mH(252KHz), Q=30)	RTF1020
<u>A</u>	IC282 IC151, IC351 IC551, IC552	BA6138 CX20188 ICP-N20		L405, L406 L401, L402 L151, L152	(L=3.9mH(252KHz), Q=30) (L=5.6mH(252KHz), Q=30)	RTF1020 RTF1022
⚠	IC282 IC151, IC351 IC551, IC352 IC401, IC402	BA6138 CX20188 ICP-N20 M5238P		L405, L406 L401, L402	(L=3.9mH(252KHz), Q=30) (L=5.6mH(252KHz), Q=30)	RTF1020 RTF1022
	IC282 IC151, IC351 IC551, IC552 IC401, IC402 IC101, IC561, IC562	BA6138 CX20188 ICP-N20 M5238P NJM2114D		L405, L406 L401, L402 L151, L152 F301, F302	(L=3.9mH(252KHz), Q=30) (L=5.6mH(252KHz), Q=30)	RTF1020 RTF1022 RTF1175
Δ	IC282 IC151, IC351 IC551, IC552 IC401, IC402 IC101, IC561, IC562 IC571	BA6138 CX20188 ICP-N20 M5238P	CAP	L405, L406 L401, L402 L151, L152	(L=3.9mH(252KHz), Q=30) (L=5.6mH(252KHz), Q=30)	RTF1020 RTF1022 RTF1175
<u>^</u>	IC282 IC151, IC351 IC551, IC552 IC401, IC402 IC101, IC561, IC562	BA6138 CX20188 ICP-N20 M5238P NJM2114D	CAP	L405, L406 L401, L402 L151, L152 F301, F302	(L-3. 9mH(252KHz), Q-30) (L-5. 6mH(252KHz), Q-30)	RTF1020 RTF1022 RTF1175 RTF1062
<u>.</u>	IC282 IC151, IC351 IC551, IC552 IC401, IC402 IC101, IC561, IC562 IC571 IC572	BA6138 CX20188 ICP-N20 M5238P NJM2114D NJM78M12FA	CAP	L405, L406 L401, L402 L151, L152 F301, F302 ACITORS C283, C284	(L-3. 9mH(252KHz), Q-30) (L-5. 6mH(252KHz), Q-30)	RTF1020 RTF1022 RTF1175 RTF1062
<u>^</u>	IC282 IC151, IC351 IC551, IC552 IC401, IC402 IC101, IC561, IC562 IC571	BA6138 CX20188 ICP-N20 M5238P NJM2114D NJM78M12FA	CAP	L405, L406 L401, L402 L151, L152 F301, F302 ACITORS C283, C284	(L-3. 9mH(252KHz), Q-30) (L-5. 6mH(252KHz), Q-30)	RTF1020 RTF1022 RTF1175 RTF1062 CCPUSL470J50 CEAS010M50
_	IC282 IC151, IC351 IC551, IC552 IC401, IC402 IC101, IC561, IC562 IC571 IC572	BA6138 CX20188 ICP-N20 M5238P NJM2114D NJM78M12FA NJM79M12FA	CAP	L405, L406 L401, L402 L151, L152 F301, F302 ACITORS C283, C284 C211, C281	(L-3. 9mH(252KHz), Q-30) (L-5. 6mH(252KHz), Q-30)	RTF1020 RTF1022 RTF1175 RTF1062 CCPUSL470J50 CEAS010M50 CEAS100M50
<u>^</u>	IC282 IC151, IC351 IC551, IC552 IC401, IC402 IC101, IC561, IC562 IC571 IC572	BA6138 CX20188 ICP-N20 MS238P NJM2114D NJM78M12FA NJM79M12FA UPC4572C	CAP	L405, L406 L401, L402 L151, L152 F301, F302 ACITORS C283, C284 C211, C281 C464, C471 C855	(L-3. 9mH(252KHz), Q-30) (L-5. 6mH(252KHz), Q-30)	RTF1020 RTF1022 RTF1175 RTF1062 CCPUSL470J50 CEAS010M50 CEAS100M50 CEAS101M10
<u>^</u>	IC282 IC151, IC351 IC551, IC552 IC401, IC402 IC101, IC561, IC562 IC571 IC572 IC301 Q581	BA6138 CX20188 ICP-N20 M5238P NJM2114D NJM78M12FA NJM79M12FA UPC4572C 25A1309A	CAP	L405, L406 L401, L402 L151, L152 F301, F302 ACITORS C283, C284 C211, C281 C464, C471	(L-3. 9mH(252KHz), Q-30) (L-5. 6mH(252KHz), Q-30)	RTF1020 RTF1022 RTF1175 RTF1062 CCPUSL470J50 CEAS010M50 CEAS100M50
<u>^</u>	IC282 IC151, IC351 IC551, IC552 IC401, IC402 IC101, IC561, IC562 IC571 IC572 IC301 Q581 Q562, Q576 Q103-Q110	BA6138 CX20188 ICP-N20 MS238P NJM2114D NJM78M12FA NJM79M12FA UPC4572C 2SA1309A 2SB942 2SC2240	CAP	L405, L406 L401, L402 L151, L152 F301, F302 ACITORS C283, C284 C211, C281 C464, C471 C855 C581	(L-3. 9mH(252KHz), Q-30) (L-5. 6mH(252KHz), Q-30)	RTF1020 RTF1022 RTF1175 RTF1062 CCPUSL470J50 CEAS010M50 CEAS100M50 CEAS101M10 CEAS220M50
<u>^</u>	IC282 IC151, IC351 IC551, IC552 IC401, IC402 IC101, IC561, IC562 IC571 IC572 IC301 Q581 Q562, Q576	BA6138 CX20188 ICP-N20 M5238P NJM2114D NJM78M12FA NJM79M12FA UPC4572C 25A1309A 25B942	CAP	L405, L406 L401, L402 L151, L152 F301, F302 ACITORS C283, C284 C211, C281 C464, C471 C855 C581	(L-3. 9mH(252KHz), Q-30) (L-5. 6mH(252KHz), Q-30) C282, C334, C463	RTF1020 RTF1022 RTF1022 RTF1175 RTF1062 CCPUSL470J50 CEAS1010M50 CEAS101M10 CEAS220M50 CEAS30M16
<u>^</u>	IC282 IC151, IC351 IC551, IC552 IC401, IC402 IC101, IC561, IC562 IC571 IC572 IC301 Q581 Q562, Q576 Q103-Q110	BA6138 CX20188 ICP-N20 M5238P NJM2114D NJM78M12FA NJM79M12FA UPC4572C 25A1309A 25B942 25C2240 25D1267	CAP	L405, L406 L401, L402 L151, L152 F301, F302 ACITORS C283, C284 C211, C281 C464, C471 C855 C581	(L-3. 9mH(252KHz), Q-30) (L-5. 6mH(252KHz), Q-30) C282, C334, C463	RTF1020 RTF1022 RTF1175 RTF1062 CCPUSL470J50 CEAS010M50 CEAS100M50 CEAS101M10 CEAS220M50 CEAS330M16 CEAS34RTM50
<u>^</u>	IC282 IC151, IC351 IC551, IC552 IC401, IC402 IC101, IC561, IC562 IC571 IC572 IC301 Q581 Q562, Q576 Q103-Q110 Q561, Q575	BA6138 CX20188 ICP-N20 MS238P NJM2114D NJM78M12FA NJM79M12FA UPC4572C 2SA1309A 2SB942 2SC2240	CAP	L405, L406 L401, L402 L151, L152 F301, F302 ACITORS C283, C284 C211, C281 C464, C471 C855 C581	(L-3. 9mH(252KHz), Q-30) (L-5. 6mH(252KHz), Q-30) C282, C334, C463	RTF1020 RTF1022 RTF1022 RTF1175 RTF1062 CCPUSL470J50 CEAS1010M50 CEAS101M10 CEAS220M50 CEAS30M16

Mark No. E	Description	Part No.	Mark	No.	Description	Part No.	Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
C119, C120		CFTXA104J50		R453, R454		RDR1/4PM151J			14, C857, C858	CFTYA474J50		R1175, R11		RDR1/4PM113J
			1	R129, R130	(1.8K)	RDR1/4PM182J			38, C855, C856	CFTYA823J50		R1107, R110		RDR1/4PM123J
C407, C408		CFTXA122J50							52 (C=100, V(DC)=25)	RCH1057		R1181, R113	32 (16K)	RDR1/4PM163J
C437, C438		CFTXA152J50		R203, R204		RDR1/4PM221J			04, C901-C904 (C=1, V(DC)=	RCH1079		R1179, R118	00 (2 48)	RDR1/4PM242J
C151-C154, C355-	-C358	CFTXA222J50			R127, R128 (2. 2K)	RDR1/4PM222J		C897-C90	00 (C=10, V(DC)=50)	KCH1080		R1183, R11		RDR1/4PM273J
C405, C406 C113, C114, C155,	C156 C250 C260	CFTXA272J50 CFTXA392J50		R131, R132 R313, R314		RDR1/4PM223J RDR1/4PM242J	RESIS	TORS				R1207, R120		RDR1/4PM432J
C113, C114, C155,	C130, C339, C300	CF1AA392J50		R313, R314 R301, R302		RDR1/4PM242J RDR1/4PM303J	RESIS		04 (100Ω)	RDR1/4PM101J			74, R1177, R1178 (5. 1K)	RDR1/4PM512J
C403, C404, C443,	CALA	CFTXA472J50	,	K3U1, K3U2	(307)	RDR1/4783U3J		R805. R86	06 (1.1K)	RDR1/4PM112J		R1203, R120		RDR1/4PM683J
C173, C174, C377,		CFTXA562J50		R101, R102	(2201)	RDR1/4PM334J		R875. R87		RDR1/4PM113J				
C335, C455, C456,		CFTXA682J50		R561. R562		RDR1/4PM392J			04 (120K)	RDR1/4PM124J		R1105, R11	06 (750Ω)	RDR1/4PM751J
C459, C460	C401, C402	CFTXA822J50			R563, R564, R577, R578	RDR1/4PM472J		R807, R80	08 (15K)	RDR1/4PM153J		R1205, R12		RDR1/4PM822J
C175, C176, C379,	C380, C401, C402,	CFTYA103J50		(4. 7K)	1 11000, 11004, 11011, 11010	HURLY 11 WIT 1 DJ						R1171, R11		RDR1/4PM823J
C413, C414	,	***************************************		R117. R118	(51Ω) ·	RDR1/4PM510J		R881, R88		RDR1/4PM163J		VR1101, VR		RCP1104
					R417, R418 (560Ω)	RDR1/4PM561J			80 (2.4K)	RDR1/4PM242J		OTHER RES	ISTORS	RD1/6PM□□□J
C161, C162, C365,	C366	CFTYA153J50						R883, R88		RDR1/4PM273J				
C159, C160, C363,		CFTYA154J50	1	R121, R122	(62K)	RDR1/4PM623J			74, R877, R878 (5. 1K)	RDR1/4PM512J	CON	ITROL	UNII	
C165, C166, C369,	C370	CFTYA224J50	j	R465, R466	(680Ω)	RDR1/4PM681J		R871, R8	72 (82K)	RDR1/4PM823J				
C115, C116		CFTYA273J50		VR151, VR15		RCP1020					SEMI	CONDUCT		D410000W
C451, C452		CFTYA274J50		VR331, VR33		RCP1045			R802 (22K)	RCP1103		IC701, IC7		BA10393N BA6109
			1	VR281, VR28	B2, VR401, VR402 (22K)	RCP1046		OTHER R	ESISTORS	RD1/6PM□□□J		IC671, IC6 IC652	21	M6M80011AL
C253, C257		CFTYA473J50					DEC	ODE	INIT			IC652 IC651		PD4359A
C157, C158, C361,		CFTYA474J50		VR333 (47)		RCP1047	DEC	ODE	UNII			IC651 IC661, IC7	19	TC4050BP
C103, C104, C169,		CFTYA563J50			02 (470Ω)	RCP1109	or.	- ANDII	OTODO			10001, 101	19	1C4U3UDF
C557, C558, C563,		CDC111000100		VR971 (20		RCV1019	SEMIC	IC1101.		CXA1417S-P		Q681-Q683	0687	2SA1309A
C167, C168, C331, C551, C552	C311, C312	CFTYA683J50	(OTHER RESI	ISTORS	RD1/6PM□□□J		IC1101,	101102	M5238AP		Q706	4001	2SC3311A
C351, C352		CKCYF103Z50	OTHER					IC1103		M5238P		Q705, Q709		DTA114ES
C300		CKCYF473Z50			DI PIN JACK (2P)	RKB1020		101100		MODOGI		Q655, Q656		DTA114TS
C473-C476		CKPUYY103N16			ONNECTOR ASSY (4P)	RKP1434	CAPA	CITORS	:				-Q674, Q688, Q715	DTC114ES
C332		CQMA104J50		CN21 CONNE		TXC-P13P-A1	.		1142, C1147, C1148	CEASR10M50			*************	
C333, C336		CQMA123J50		CN20 CONNE		TXC-P15P-A1			1116, C1123, C1124, C1145,	CEASR22M50		Q668, Q707	. Q708, Q710	DTC114TS
C337		CQMA182J50		TERMINAL	octon.	RKC-056		C1146				Q667		DTC124ES
		3421102000		SCREW		IBZ30P100FCC		C1185, C	1186	CEASR47M50	Δ	D681		1SR35-100A
C303, C304		CQSA221J50	•			122001 1001 00		C1113, C	1114	CENA100M50		D651-D653	. D665	1SS254
C467, C468		CQSA561J50	ENC	DDE UI	NIT			C1109, C	1110	CENA220M50				
C101, C102		CQSF101J50									COIL			
C117, C118, C179,		PCH1076		ONDUCT					1132, C1169, C1170	CFTXA102J50		L671 (L=0	. 15mH, Q=30)	RTF1068
C415, C416 (C=10				IC801, IC80	02	CXA1417S-P			1176, C1179-C1182, C1195,	CFTXA182J50	040	CITORS		
C447, C448 (C=22	11, V(DC)=25)	PCH1077		IC804		M5238AP		C1196			CAPA			CEANP4R7M25
			Ī	IC803		UPC4572C		C1171, C		CFTXA222J50		C681	, C702, C713	CEASIOOM50
C565, C566, C579,		PCH1084						C1173. C		CFTXA471J50 CFTXA681J50		C652, C651	, C102, C113	CEASIONNIO
(C=101, V(AC)=25				CITORS				C1127, C	.1128	CLIVVOOIDO		C685		CEASIOIMI6
C555 (C=3300UF,		RCH1048			C847, C848	CEASR10M50		C1122 C	1134, C1167, C1168	CFTXA822J50		C653		CEAS102M6R3
C556 (C=3300UF,		RCH1049			C823, C824, C845, C846	CEASR22M50			1112, C1121, C1122, C1159,	CFTYA104J50		5555		
C163, C164, C171,		RCH1079		C885, C886		CEASR47M50			1183, C1184, C1189, C1190,	G 11/1104550		C666, C684		CEAS330M16
C367, C368, C375, (C=1, V(DC) = 50)				C813, C814		CENA100M50		C1193, C				C682		CEASR22M50
		DCU1000	,	C809, C810		CENA220M50		C1125. C		CFTYA105J50			. C671, C683, C714-C716	CKCYF103Z50
C353, C354, C435, C575, C576 (C=10		RCH1080	,	C021 C020	C869, C870	CFTXA102J50			21140, C1165, C1166	CFTYA153J50		C672, C701		CKCYF473250
CO10, CO10 (C=10	1 (100)-00)				. C879-C882, C895, C896	CFTXA102J50 CFTXA182J50			:1118, C1191, C1192	CFTYA183J50		C657, C658		CKPUYB101K50
C109-C112, C177,	C178, C181, C182	RCH1082		C871, C872		CFTXA222J50				* *				
	C392 (C=22, V(DC)=			C873, C874		CFTXA471J50		C1119, C	C1120, C1187. C1188	CFTYA223J50	RESI	STORS		
C453, C454, C573,		RCH1083		C827, C828		CFTXA681J50			C1136, C1161, C1162	CFTYA224J50			(10K/20K)	RCX1042
(C=33, V(DC)=25)				,		W 1.000000		C1153, C	21154	CFTYA334J50		R711		RN1/6PQ1503F
				C833. C834.	C867, C868	CFTXA822J50		C1129, C	C1130, C1177, C1178	CFTYA393J50		R706		RN1/6PQ2002F
RESISTORS					C821, C822, C859, C860,	CFTYA104J50		C1163, C	21164	CFTYA473J50		R712		RN1/6PQ2003F
R470 (100K)		RA11T104J			C889, C890, C893, C894							R705		RN1/6PQ2203F
R409, R410 (100K		RCN1043	(C825, C826		CFTYA105J50		C1143. C	C1144, C1157, C1158	CFTYA474J50		D710		RN1/6PQ3901F
RIII, RII2 (100 C		RDR1/4PM101J			C865, C866	CFTYA153J50		C1137, C	C1138, C1155, C1156	CFTYA823J50 RCH1057		R710 R709		RN1/6PQ7501F
R133, R134, R201, 1	R202, R315, R316,	RDR1/4PM102J	(C817, C818,	C891, C892	CFTYA183J50		C1149-(C1152 (C=100, V(DC)=25)			R681 (1Ω	1)	RS1LMF010J
R575, R576 (1K)									C1204 (C=1, V(DC)=50)	RCH1079 RCH1080		OTHER RES		RD1/6PM□□□J
R151, R152, R431,	R432, R571, R572(10	DK)RDR1/4PM103J			C887, C888	CFTYA223J50		C1191-(C1200 (C=10, V(DC)=50)	VCU 1000		OTHER REC	110110110	1101/ VI #11111111111111111111111111111111111
					C861, C862	CFTYA224J50	DECK	TOD0			отн	EDC .		
R115, R116, R303,		RDR1/4PM104J		C853, C854		CFTYA334J50	HESI	STORS	R1202, R1209, R1210 (100Ω)	RDR1/4PM101J	Oin	JA71 MINI	1ACK	RKN1014
R355, R356 (12K)		RDR1/4PM123J			C877, C878	CFTYA393J50			R1216 (1K)	RDR1/4PM102J		CN210 COR		TXC-P13X-A1
R150, R350 (130K	.)	RDR1/4PM134J	(C863, C864		CFTYA473J50	•	K1215, F	11610 (IN)	INTITAL MITORY		31210 W		
														20

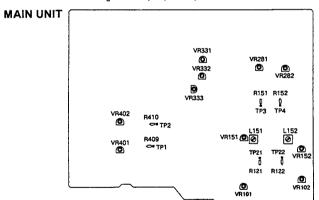
Mark	No. Des	cription	Part No.	Mark	No.	Description	Part No.	Mark No. Description	Part No.
	CN200 CONNECTOR		TXC-P15X-A1		Q535, Q536		DTC114TS	HEADPHONE UNIT	
	X651 CERAMIC RESON	ATOR(4.19MHz)	VSS1014		Q508, Q510		DTC124ES		
				Δ	D604, D621		1SR35-100A	SEMICONDUCTORS	
BAL	.VR UNIT				D501, D502, I	0611-D613	1SS254	IC231	M5238AP
				⚠	D623		MTZJ24D	Q231, Q232	2SD2144S
RESIS	TORS		B0011000		2000		1000 T 0 0 0	CAPACITORS	
	VR973 (200KΩ)		RCV1078		D622		MTZJ6. 8B		0001101010
-	INIT			Δ	D601		S2VB20	C231, C232 C237, C238	CEYA010M50
רב נ	INE I			SWITC	SUEC			C235, C236	CEYA4R7M50
e=161	CONDUCTORS			Δ	\$641		RSA-063	C233, C234 (C-101, V(DC)-25)	CKPUYB221K50 PCH1076
DE IAII	IC721		PD3198A	212	3041		NOA-003	C200, C204 (C-101, 1 (DC)-23)	runioro
	D724-D729, D750-D75	2	1SS254	COILS	3			RESISTORS	
	D181 D183, D130 D13	•	100001		L535, L536		LFA122J	R237, R238 (100Ω)	RDR1/4PM101J
WIT	CHES				L521, L522	(F=210KHz)	RTD1045	VR231 (20KB)	PCS1002
	S721-S729		RSG1030		L502	·,	RTD1067	OTHER RESISTORS	RD1/6PM□□□□J
	S735		RSH1011		L501 (1mH)		RTF1160		
								OTHERS	
COILS	3			CAPA	CITORS			JA231 HEADPHONE JACK	RKN1002
	L701-L703		PTH1008		C521		CCCCH470J50	DEO OVEZOU UNIO	
					C525, C526		CCCSL221K500	REC SWITCH UNIT	
CAPA	CITORS				C503, C516		CEAS100M50		
	C722		CEAS100M50		C502, C606, 0	0626	CEAS101M16	SWITCHES	
	C721, C723		CKCYF103Z50		C624		CEAS101M25	S3	RSG-143
							**********	TAPE SELECTOR UNIT	
RESIS	TORS		PR 4 (4 PM = 1 PM = 1		C622		CEAS101M50	TAPE SELECTOR UNIT	
	ALL RESISTORS		RD1/6PM□□□J		C608		CEAS102M6R3	SWITCHES	
	-00				C515	200	CEAS220M25	SI, 2	RSH-070
OTHE		TIME	RAW1096		CS04, C505, C CS17, C611	.531	CEAS330M16 CEAS4R7M50	31, 2	K2H-010
	V721 FL INDICATOR X721 CERAMIC RESON				C317, C611		CEASARIMOU	CONNECTOR UNIT	
	A121 CERMIC RESON	AIOR (4. 13mn2)	1331014		C607		CEAS682M16		
)PF	RATION UNIT	7			C535, C536		CFTXA103J50	CAPACITORS	
J		1			C509		CFTXA153J50	Cl	CKCYF473Z50
FMI	CONDUCTORS				C507, C508		CFTXA222J50		G1011 1 (0200
	1C781		BU2040		C531, C532		CFTXA223J50	RESISTORS	
	D781		SEL6410G		,			ALL RESISTORS	RD1/6PM□□□J
	D786-D788		SEL6910A		C510		CFTXA332J50		
	D783		SEL6910D		C529, C530		CFTXA333J50	OTHERS	
	D782, D784, D785, D78	9	SEL6C10R		C539, C540,		CKCYF103Z50	CN61 CONNECTOR (7P)	SBRK07S
						C524, C601-C603, C621,	CKCYF473Z50	CN62 CONNECTOR (9P)	SBRK09S
:WIT	CHES				C623, C625,	C627, C628		CENCOD UNIT (D)	
	S781-S793		RSG1030		C533, C534		CKPUYB471K50	SENSOR UNIT (B)	
								OF HOOLINI ISTORA	
CAPA	CITORS					00PF, A=J, VDC=100)	RCE1026	SEMICONDUCTORS	
	C782		CEJA100M16			(C-390P, V(DC)-500)	RCG1004	D2	GP1A51HR
	C781		CKCYF103Z50			00UF, VDC=25, A=20)	RCH1032	CAPACITORS	
	C790, C791		CKPUYB101K50	Δ	C641		VCG-044	C3	CKPUYY103N16
	C792		CKPUYY103N16	DECK	STORS			CO	CAPUIIIUSNIO
	STORS			HESIS	R511		RD1/2LF010J	RESISTORRS	
(E2)	ALL RESISTORS		RD1/6PMCCCJ		R503		RD1/2LF120J	ALL RESISTORS	RD1/6PM□□□J
	ALL RESISIONS				R509, R510		RD1/2DF1203 RD1/2PMF100J		
RIA:	SUNIT				R622		RD1/2PMF562J		
	J () (1) (1)			⚠	R621 (47Ω)	RFA1/4L470J		
SEMI	CONDUCTORS					,			
	IC607		NJM7805FA		R516		RN1/6PQ2202F		
	IC605, IC606		NJM7812FA		R515		RN1/6PQ6801F		
			UPC1297CA		R623 (1.5K)	RS1LMF152J		
	IC521		2SA1283		VR545, VR54	6 (15K)	RCP1090		
	IC521		20H1200				RD1/6PM□□□J		
1			2SA1283		OTHER RESI	21002			
Δ	IC521 Q504					310113			
Δ	IC521 Q504 Q623 Q513, Q614		2SA1283 2SA1309A	ОТНЕ	RS	31013			
1	IC521 Q504 Q623 Q513, Q614 Q507, Q509		2SA1283 2SA1309A 2SC3311A	ОТНЕ Ф		51005	RKC-061		
Δ	IC521 Q504 Q623 Q513, Q614 Q507, Q509 Q505, Q506		2SA1283 2SA1309A 2SC3311A 2SD1302		RS	31010			
Δ Δ	IC521 Q504 Q623 Q513, Q614 Q507, Q509		2SA1283 2SA1309A 2SC3311A		RS	SIMO			

6. ADJUSTMENTS

6.1 MECHANICAL ADJUSTMENT

Mode	Test tape	Adjustment position	Specification rating (playback frequency)
PLAY	Play the STD-301 tape (3kHz)	Tape speed adjustment hole	3015Hz ± 5Hz

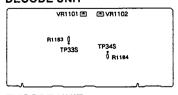
Fig. 6-1 Tape speed adjustment



BIAS UNIT



DECODE UNIT



ENCODE UNIT

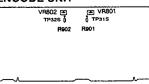


Fig. 6-2 Adjusting points

6.2 ELECTRICAL ADJUSTMENTS

Adjustment Conditions

- 1. The mechanical adjustments must be completed first.
- 2. The head must be cleaned and demagnetized.
- Turn power on allow the deck to warm up for at least a few minutes before commencing any electrical adjustments.
- 4. The reference signal is 0 dBV=1 Vrms.
- 5. Connect a 50 k Ω (or between 47k to 52 k Ω) load resistance to the OUTPUT terminals.
- Unless otherwise specified, the switches listed below are left in the positions indicated.

DOLBY NR : OFF TAPE SELECTOR : NORM

Test Tapes

 STD-331E
 : Playback adjustments

 (See Fig. 6-3)

 STD-631
 : NORMAL blank tape

 STD-621
 : CrO2 blank tape

 STD-610
 : METAL blank tape

*As the reference recording level is 250 nwb/m for STD-331E, the recording level will be higher by 4 dB for STD-331B (160 nwb/m). When adjusting, pay carefull attention to the type of tape used.

List of Adjustments

Playback sections

- 1. Head azimuth adjustment.
- 2. Playback level adjustment.
- 3. DC balance adjustment.

Recording sections

- 1. Bias oscillator adjustment.
- 2. Bias trap adjustment.
- 3. DOLBY-S encoder adjustment.
- 4. Recording bias adjustment.
- 5. Recording level adjustment.
- 6. Level meter check.
- o. Dever meter cheek.
- 7. AUTO BLE adjustment.

NOTE: This unit has an automatic tape selection feature.

Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

"DOLBY",the double-D symbol DD and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

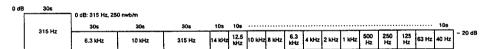
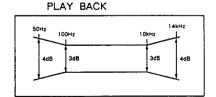


Fig. 6-3 Constants of the test tape STD-331E

Head azimuth adjustment screw

Fig. 6-4 Head azimuth adjustment



RECORDING

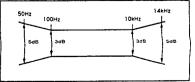


Fig. 6-5 Frequency response zone

PLAYBACK SECTION

1. Head Azimuth Adjustment

. Turn VR151, 152 to mechanical center positions.

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	PLAY	Play the 10 kHz/-20 dB section of STD-331E test tape.	Head azimuth adjustment screw. (See Fig. 6-4)	LINE OUT	Maximum playback signal level.	
2.	STOP	Lock the screw with screw k	ock after completing adjustment.			1

Note: The left and right phase difference for the 12.5 kHz tone should be within 75 degrees. (That for the 10 kHz tone should be within 60 degrees.)

2. Playback Level Adjustment

This adjustment determines the DOLBY NR level, and must be performed with great care.

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	Set the Do	OLBY NR switch to the S positio	n.				
2		Play the 315 Hz/0 dB section	DOLBY S	VR1101 (Lch)	TP. 33S (Lch)		*··
		of the STD-331E test tape.	DOLBIS	VR1102 (Rch)	TP. 34S (Lch)	-8.5 dBV	
3.	Set the DO	OLBY NR switch to the OFF pos	ition.				
4.	PLAY	Play the 315 Hz/0 dB section of the STD-331E test tape.	Deck	VR151 (Lch) VR152 (Rch)	TP. 3 (Lch) TP. 4 (Lch)	-11.0 dBV	

3. DC Balance Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
<u>.</u>	-	_	VR101(Lch) VR102(Rch)	TP. 21(Lch) TP. 22(Rch)	0V ± 0.2V	

RECORDING SECTION

1. Blas Oscillator Adjustment

No.	Mode	Input signal & test tape	Adjus	stment location	Measuring location	Adjustment value	Remarks
1.	REC/ PLAY	Load the STD-610 test tape with no input signal.	Deck	L502	TP. 11	210kHz ± 800 Hz	

2. Blas Trap Adjustment

No.	Mode	Input signal & test tape	Adjus	stment location	Measuring location	Adjustment value	Remarks
1.	REC/ PLAY	Load the STD-610 test tape with no input signal.	Deck	L151 (Lch) L152 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	Minimum output	-

3. DOLBY-S Encoder Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	Set the D	OLBY NR switch to the OFF p	osition.			
2.	REC/ PAUSE	Apply a 315 Hz/-10 dBV signal to the line input terminals.	REC level control volume	TP. 1 (Lch) TP. 2 (Rch)	-15.2 dBV	
3.	Set the D	OLBY NR Switch to the S posi	tion.	<u> </u>	1	
4.	REC/ PAUSE	Apply a 315 Hz/-10 dBV signal to the line input terminals.	VR801 (Lch) VR802 (Rch)	TP. 1 (Lch) TP. 2 (Rch)	~14.5 dBV	

4. Recording Blas Adjustment

After the adjustment, Caution should be exercised so as not to become under bias by checking the distortion rate.

No.	Mode	Input signal & test tape	Adju	stment location	Measuring location	Adjustment value	Remarks
1.	REC/	Record the 315 Hz and 10kHz signals at ~ 26 dBV input level onto the STD ~ 631 test tape, and Playback.			Repeatedly record, playback and adjust so that the playback level of 10 kHz signal becomes 0 dB ± 0.5dB when compared with the 315Hz signal.		
2.	PLAY	Record the above signal onto the STD-621 test tape, and playback.	CrO2	VR543 (Lch) VR544 (Rch)	LINE OUT	0 dB ± 0.5 dB	
3.		Record the above signal onto the STD-610 test tape, and playback.	test MET. VR545 (Lch) VR546 (Rch)	0 dB ± 0.5 dB			
4.	Set the DO	DLBY HX PRO switch to the Of	F position.				
5.	REC → PLAY	Record and playback the 315 Hz signal and a 10kHz signal at -26 dBV input level.	NOR	VR535 (Lch) VR536 (Rch)	LINE OUT	Turn the control fully counterclockwise, and gradually turn to the right to adjust to 0 dB ± 0.5 dB compared when HX-Pro is ON.	Turn control clockwise past the peak to assure proper overbias value.
6.	Set the DO	LBY NR switch to the S position	on.				
7.		Record the 315 Hz and 10kHz signals at - 26 dBV input level onto the STD - 631 test tape, and Playback.	NOR.	VR541 (Lch) VR542 (Rch)		Repeatedly record, playback and adjust so that the playback level of 10 kHz signal becomes 0 dB ± 1.0dB when compared with the 315Hz signal.	
8.		Record the above signal onto the STD-621 test tape, and playback.	CrO2	VR543 (Lch) VR544 (Rch)	LINE OUT	0 dB ± 1.0 dB	
9.		Record the above signal onto the STD-610 test tape, and playback.	MET.	VR545 (Lch) VR546 (Rch)		0 dB ± 1.0 dB	 .

Note: Adjust in the order of NOR → CrO2 → METAL. After completing all adjustments, note that the adjustment values for CrO2 and METAL will be altered if NOR is re-adjusted, and that for METAL will be altered if CrO2 is re-adjusted.

5. Recording Level Adjustment

. Set the DOLBY NR switch to the OFF position.

No.	Mode	Input signal & test tape	Adju	stment location	Measuring location	Adjustment value	Remarks
1.	REC PAUSE	Apply a 315 Hz/ - 4 dBV signal to the line input terminals, load the STD-631 test tape.	REC level control volume		TP. 3 (Lch) TP. 4 (Rch)	-15.2 dBV	
2.	REC/ PLAY	Record the above signal onto the STD - 631 test tape, and playback.	Deck	VR401 (Lch) ar VR402 (Rch) pi		Repeatedly record, playback and adjust so that the playback signal level becomes –15.2 dB.	
3.	REC/ PLAY	Record the above signal onto the STD - 621 test tape, and playback.	Check		TP. 3 (Lch) TP. 4 (Rch)	-15.2 dBV ± 1 dB	
4.	REC/ PLAY	Record the above signal onto the STD - 610 test tape, and playback.	Check			-15.2 dBV ± 1 dB	
5.	STOP	Set the DOLBY NR switch to	the S positi	on.			
6.	REC/ PLAY	Record the above signal onto the STD - 631 test tape, and playback.	Check		LINE OUT	0 dB ± 0.5 dB for paragraph 2.(*1)	

^{*1:} If this confirmation value cannot be obtained, perform "Playback Level Adjustment" and "DOLBY - S Encoder Adjustment" once again.

6. Level Meter Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	REC PAUSE	Apply a 315 Hz/-8 dBV (501 mV) signal to the line input terminals.	VR281 (Lch) VR282 (Rch)	TP. 1 (Lch) TP. 2 (Rch)	Adjust that the level meters " 0 dB " light up within — 11.2 dBV ± 0.5 dB of the signal output level.	

Note: Rotate from the left to the right, and adjust so that it lights up. Be sure to adjust properly as it will serve as the reference level for BLE.

7. AUTO BLE Adjustment

- · BLE Adjustment must be performed after all other adjustments are completed.
- . This adjustment should be performed in the test mode.
- Entering the test mode
- Press the COUNTER, METER and MONITOR (AUTO) keys on the front panel simultaneously, with the power ON. The unit enters the test mode and oscillates a 400 Hz signal.

Thereafter, each time the START/CLEAR key is pressed, the oscillation frequency changes as follows: 3 kHz oscillation → 15 kHz oscillation → 400Hz oscillation

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.		REC LEVEL VR MIN or no signal input.	-	-	-	
2.	-	Press the three keys COUNTER, METER and MONITOR (AUTO) on the front panel simultaneously.	VR331		Adjust so that 0 dB on the level meter lights.	400 Hz adjustment
3.		Press the START/CLEAR key once.	VR332	Level meter Rch	Adjust so that 0 dB on the level meter lights.	3 kHz adjustment
4.		Press the START/CLEAR key once.	VR333		Adjust so that -3 dB on the level meter lights.	15 kHz adjustment

6. FOR CT-95/SD, CT-S9209/HEM AND CT-99209-Q/HEM

NOTES

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The \triangle mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "O" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.
- Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and

17-107	''
560 Q	\rightarrow 56 × 10' \rightarrow 561 ······ RD1/8PM 5 6 1 J
17k O	\rightarrow 47 × 10 ² \rightarrow 473 RDI/4PS [4] [7] [3] J
0.5.0	→ OR5 ······RN2H ORS K
0.5 🖸	→ 010 · · · · · · · · RS1P 0 1 0 K
1Ω	→ 010 ······ KSIP[0][1][0]K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Q→562 × 10'→5621RN1/4PC5621F

CT-95/SD, CT-S920S/HEM, CT-S920S-G/HEM and CT-95/HEM have the same construction except for the following:

			Part	No.		
Mark	Symbol & Description	CT-95/ HEM	CT-95/ SD	CT-S920S/ HEM	CT-S920S-G/ HEM	Remarks
	Main unit	RWX1081	RWX1081	RWX1091	RWX1091	
	Control unit	RWZ2984	RWZ2990	RWZ2996	RWZ2996	
	BAL VR unit	RWZ2985	RWZ2991	RWZ2997	RWZ2997	
	FL unit	RWZ2986	RWZ2992	RWZ2998	RWZ2998	
	Operation unit	RWZ2987	RWZ2993	RWZ2999	RWZ2999	
NSP	Bias unit	RWZ2988	RWZ2994	RWZ3000	RWZ3000	
NSP	Headphone unit	RWZ2989	RWZ2995	RWZ3001	RWZ3001	
NSP	Encode unit	RWZ2743	RWZ2743	RWZ2797	RWZ2797	
NSP	Decode unit	RWZ2744	RWZ2744	RWZ2798	RWZ2798	
Δ	AC power cord	ADG1036	PDG1013	ADG1036	ADG1036	
Δ	T1 Power transformer (AC220 - 230/240V)	RTT1201		RTT1202	RTT1202	
Δ	T1 Power transformer (AC110/120 - 127/220/240V)		RTT1236			
Δ	Voltage selector		PSB1002			Screw BBZ30P080FCC
	(AC110/120 - 127/220/240V)	50/44405	RYM1185	RYM1216	RYM1216	55250, 550, 55
⊚	Mechanism unit FL filter	RYM1185 RAH1936	RAH2274	RAH1938	RAH1936	
	Front panel	RAH2280	RAH2303	RAH2281	RAH2282	
	Screw	ABA1131	ABA1131			1
	Side spacer	PEB1197	PEB1197			1
	Side plate spacer	PNM1150	PNM1150			1
	Slide SW knob	RAC1540	RAC1540	RAC1562	RAC1540	
	Power button	RAC1657	RAC1657	RAC1703	RAC1657	
	Operation button	RAC1658	RAC1658	RAC1704	RAC1658	
	Balance knob	RAC1662	RAC1662	RAC1705	RAC1662	
	VR knob assembly A	RXA1563	RXA1563			İ
	VR knob			RAC1707	RAC1708	
	Side panel	RAH1931	RAH1931			
NSP	Door	RNK1756	RNK1756			
	Door			RAH2275	RAH2132	1
	VR ring	RAT1012	RAT1012	RAT1011 FBT40P080FZH	RAT1012 RBA1088	1
	Screw	RBA1088	RBA1088	FB140F060F2F	NBA1000	1
	Screw	RBA1098	RBA1098			
	Collar	RAT1002	RAT1002			1
	Door assembly	REA1002	REA1002			
	Panel stay	RNT1176	RNT1176	RNT1177	RNT1178	1
	Bonnet	RXX1427	RXX1427	RXX1516	RXX1506	1

CT-95, CT-S920S, CT-S920S-G

	}	1	Par	t No.)	
Mark	Symbol & Description	CT-95/ HEM	CT-95/ SD	CT-S920S/ HEM	CT-S920S-G/ HEM	Remarks
	Badge	RAN1011	RAN1011		RAN1011	
	Name plate			VAM1032		
NSP	Rear panel	RNA1718	RNA1719	RNA1720	RNA1721	
NSP	Door panel	RAH2133	RAH2133			
NSP	Door badge	RAN1006	RAN1006			
NSP	Transformer sheet	REE1004	REE1004			
NSP	Main chassis	RNB1042	RNB1042	RNB1059	RNB1059	
NSP	Center stay	RNC1068	RNC1068	RNC1058	RNC1058	
NSP	Center stay	RNC1089	RNC1069	RNC1059	RNC1059	
NSP	PS holder	RNE1185	RNE1185			
NSP	Bonnet bracket	RNE1470	RNE1470			
	Packing case	RHG1489	RHG1490	RHG1491	RHG1492	
	Pad (F)	RHA1073	RHA1073	RHA1119	RHA1119	
	Pad (R)	RHA1074	RHA1074	RHA1118	RHA1118	
	Connection cord with mini plug		PDE - 319	PDE - 319	PDE - 319	
	Connection cord assembly	RDE1013	RDE1013	RDE1002	RDE1002	
	Operating instruction	RRD1138		RRD1138	RRD1138	
	(German/Italian/Dutch/Swedish/	1				
	Spanish/Portuguese)	1				

CONTROL UNIT

RWZ2990, RWZ2996 and RWZ2984 have the same construction except for the following:

Mark	Symbol & Description	RWZ2984	RWZ2990	RWZ2996	Remarks
	D665	1SS254	1SS254		
	C717		CKCYF103Z50	CKCYF103Z50	
	CN200 connector	TXC - P15X - A1	TXC - P15X - A1	TXC - P14X - A1	
	JA72, JA73 Remote control jack		RKN1004	RKN1004	

BAL. VR UNIT

Although RWZ2991, RWZ2997 and RWZ2985 are different in part number, they consist of the same components.

FL UNIT

RWZ2992, RWZ2998 and RWZ2986 have the same construction except for the following:

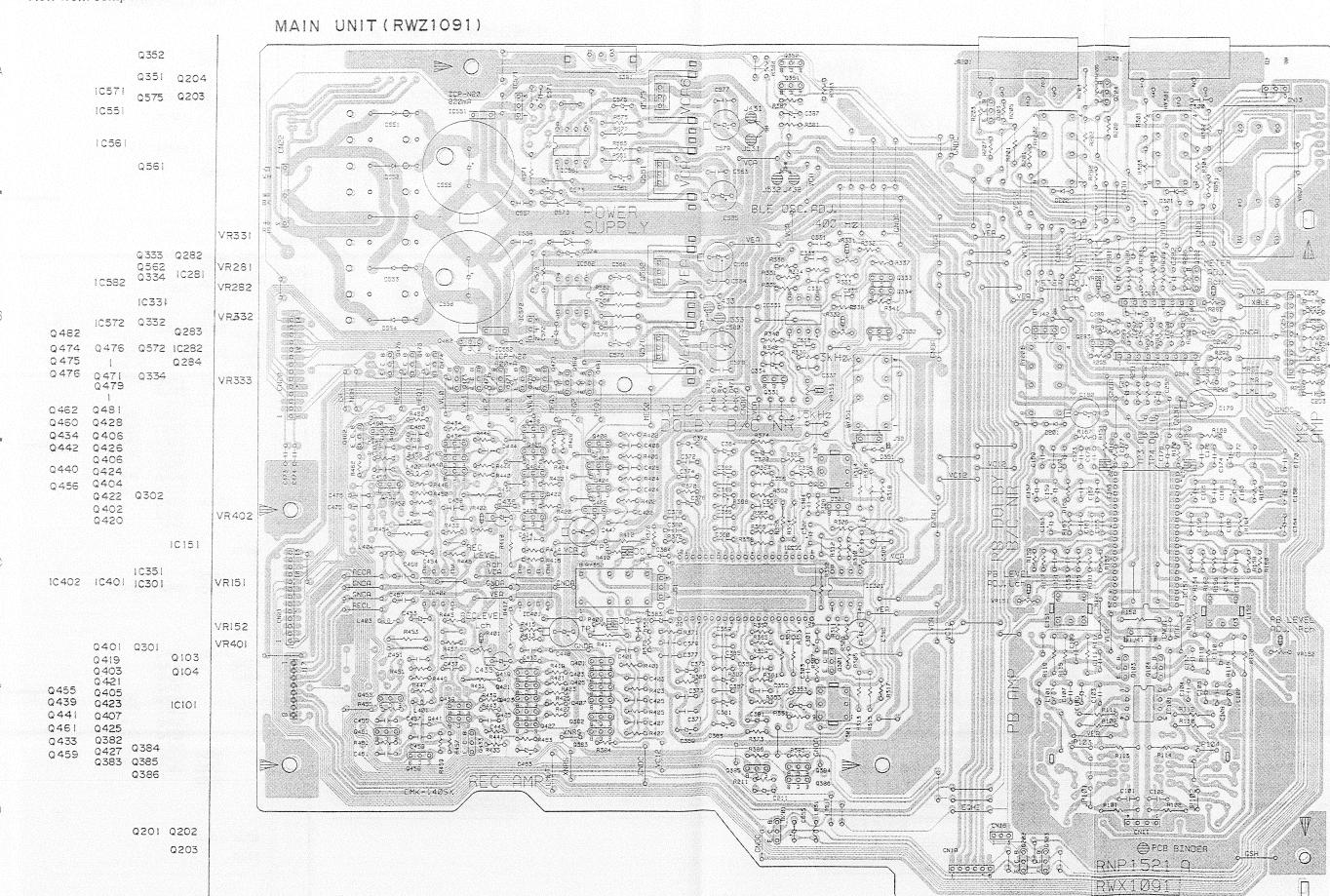
Mark	Symbol & Description	Part No.			
		RWZ2986	RWZ2992	RWZ2998	Remarks
	D735 - D737		188254	1SS254	
	L701 - D703	PTH1008	PTH1008		
	R735	RD1/8PM223J	RD1/6PM274J	RD1/6PM274J	
	R736		RD1/6PM102J	RD1/8PM102J	

OPERATION UNIT

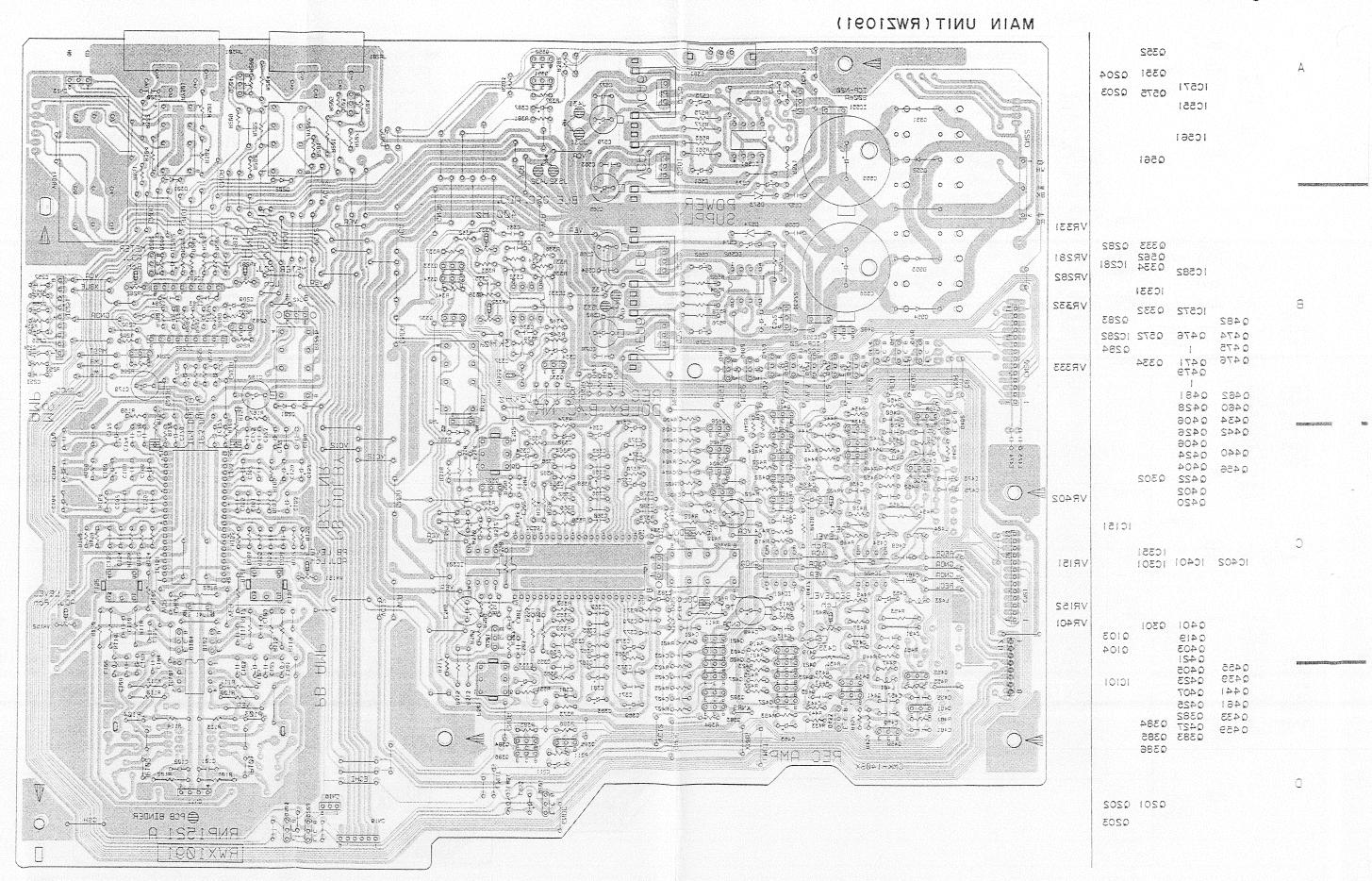
Although RWZ2993, RWZ2999 and RWZ2987 are different in part number, they consist of the same components.

PCB DIAGRAM

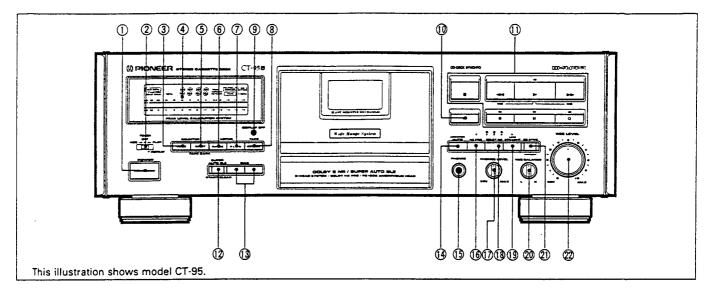
View from component side



View from soldering side



8. PANEL FACILITIES



① Power switch (POWER)

After pressing the switch, the WAIT meesage will appear in the counter display and the level meter scale will flash for about four seconds (the time necessary for circuitry to stabilize). During the time the display is flashing, no operating buttons will respond, with the exception of the cassette door open/close button (). To close the cassette door, do it while the power is turned on.

② TIMER mode/repeat play switch (TIMER REC/OFF/PLAY-REPEAT)

REC: Set to this position to perform timer recording.

OFF: Set to this position under ordinary conditions, (when not using the timer or repeat functions).

PLAY-REPEAT:

Set to this position to perform timer playback. When the switch is set to this position during normal playback, repeat playback of a single tape can be performed.

3 Counter mode button (COUNTER MODE)

Each time this button is pressed, one of the three modes (Normal tape counter/Timer counter/Remaining time counter) is set in sequence.

4 Function display

⑤ Counter reset/tape capacity selector button (COUNTER RESET/TAPE CAPA)

Reset the counter indication to "0000" in the normal tape counter or the time counter mode.

To indicate the correct time value in the remaining time counter mode, this button must be set in accordance with the tape used.

(6) Level meter mode selector button (METER MODE)

Switches between wide range, expanded range, and bias display.

① Level meter PLCS mode button (METER PLCS)

Selects the display mode of the peak level.

When press this button so that the PEAK HOLD indicator lights up, the level meter holds the maximum level indications of the signal. To erase the maximum level indications, press this button again. When the PEAK HOLD indicator goes off, the level meter holds peak indications for about 1.2 second.

[For METER PLCS Button]

In addition to the peak level display noted above, the button can also be used with the peak level calibration system to adjust tape recording levels.

Tape return button (TAPE RETURN)

This button is used in the normal tape counter mode to fast forward or rewind the tape to a point near the counter reading "0000"

Display off button (DISPLAY OFF)

Press this button to turn off the function display.

Open/Close button (♠)

Press this button to open or close the cassette door. Whenever inserting or removing a cassette tape, be sure that the power is turned on.

NOTE:

If the cassette door is closed while the unit is turned off, and the power is then turned on, the cassette door may open and close after pressing one of the operation buttons. This occurs when the microprocessor resets the door mechanism to its initial state and does not indicate any malfunctioning of the unit.

(I) Operation buttons

■ : Stop

← : Rewind/music search

▶ : Playback

>> : Fast forward/music search

: Recording: Pause

: Recording mute

10 SUPER AUTO BLE START/CLEAR button

\bigcirc Recording bias buttons (BIAS -/+)

When desired, these buttons can be used to minually adjust the recording bias after performing AUTO BLE tining.

-: Changes tone by reducing recording bias

+: Changes tone by increasing recording bias

Monitor selector button (MONITOR [AUT0])

Used to monitor the source sound or adjust recorded sound during recording.

 When the unit is set to record or playback mde, the TAPE indicator lights up and monitor mode is autimatically selected.

(1) Headphones jack (PHONES)

ODLBY* HX PRO ON/OFF button/indicator Press to turn the Dolby HX PRO system on and of.

The Headphones level control (PHONES LEVEL)

® DOLBY* NR button (OFF/B/C/S)

Press to select the Dolby NR system in the following order. The selected indicator lights up on the display.

OFF → B → C → S— (indicator will go off)

• Dolby noise reduction and HX Pro headroup extension manufactured under license from Dolby Laboratoi⊜s Licensing Corporation. HX Pro originated by Bang & Olufe €n.

"DOLBY", the double-D symbol DD and "HX PO" are trademarks of Dolby Laboratories Licensing Corporator.

CT-95, CT-S920S, CT-S920S-G

- (9 LINE STRAIGHT button/indicator
- @ Recording balance control (REC BALANCE)
- ② CD · DECK SYNCHRO recording button (CD SYNC)
- 2 Recording level control (REC LEVEL)

SPECIFICATIONS

System4 track, 2-channel stereo
Recording/playback head:
Laser amorphous playback head and Laser amorphous record-
ing head combination × 1
Erasing head: Ferrite head with sendust guard × 1
Motor
DC reel motor × 1
DC auxiliary motor × 1
Wow and FlutterNo more than 0.022% (WRMS)
No more than ±0.052% (DIN)
Fast Winding Time
(C-60 tape)
Frequency Response
-20 dB recording:
[CT-95]
TYPE IV (Metal) tape10 to 30,000 Hz (±6 dB)
TYPE II (HIGH/CrO ₂) tape
TYPE I (Normal) tape
[CT-S920S]
TYPE IV (Metal) tape
TYPE II (HIGH/CrO ₂) tape10 to 21,000 Hz (±6 dB)
TYPE I (Normal) tape
Signal-to-Noise Ratio (Dolby NR off)
[CT-95] More than 64 dB
[CT-S920S] More than 63 dB
Noise Reduction Effect
Dolby B-type NR ON More than 10 dB (at 5 kHz)
Dolby C-type NR ON More than 19 dB (at 5 kHz)
Dolby S-type NR ON More than 22 dB (at 5 kHz)
Harmonic Distortion No more than 0.6% (-4 dB)
Input (Sensitivity)
LINE (INPUT)95 mV (Input impedance 47 k Ω)
Output (Reference level)
LINE (OUTPUT)0.5 V (Output impedance 1.8 kΩ)
Headphone5.5 mW
(Load impedance 8 Ω, PHONES LEVEL control max.)

Subfunctions

- SUPER AUTO BLE system
- Bias control
- Dolby HX Pro Headroom Extension system (on/off possible)
- Dolby S-type noise reduction system
- Dolby B-type and C-type noise reduction systems
- MPX filter
- Level meter with 2 modes peak hold selection (16 + 1 segments)
- Level meter range selection (wide/expanded)
- · Peak level calibration system
- 4-digit electronic tape counter with mode selection
- Auto monitor selection (Tape/Source)
- Display off
- Music search (over ±15 selections)
- Automatic Tape Loose Canceller (ATLC)
- Tape return/Return play
- Auto space recording mute
- Auto tape selector
- Line straight
- Playback/recording timer start function
- CD · DECK SYNCHRO recording
- Headphones jack with level control
- Power eject (Open/Close)
- Repeat playback
- System remote control available (Except for CT-95 European model)
- Last memory

Miscellaneous

Power Requirements	
European model	AC 220-230 Volts-, 50/60 Hz
U.K. model	230-240 Volts~, 50/60 Hz
U.S. and Canadian model	AC 120 V, 60 Hz
Multivoltage model	AC 110/120—127/220/240 V
	(switchable), 50/60 Hz
Power Consumption	
[CT-95]	29 W
[CT_S920S]	27 14/

[CT-95]	29 W
-	27 W
_	
	$17-1/3 \text{ (W)} \times 5-5/8 \text{ (H)} \times 14-3/4 \text{ (D)} \text{ in.}$
Weight (without package)	, , , , , , , , , , , , , , , , , , , ,

[C1-59205].	•••••••	• • • • • • • • • • • • • • • • • • • •	8.0 kg (17	lb. 10 oz.)
cessories				

Operating instructions	1
Connection cord with pin plugs	2
CD · DECK SYNCHRO control cord	1
Remote control cord	1

Specifications and design subject to possible modification; without notice, due to improvements.